

Carpet Beetles In Homes Phil Pellitteri/UW Insect Diagnostic Lab

One can expect to find a few carpet beetles in any home. Larvae can feed on animal hair, dead insect, wool, horn, silk, plant seeds, feathers, pet food, old rodent bait, cereal, spices, chocolate, dried milk powder, and many other dry goods. Carpet beetles can be found in most bird and wasp nest, in attics, closet floors, along baseboards, in heating ducts and cold air returns, inside wall voids and in furniture and appliances. When large numbers are found there must be a hot spot that is generating the insects. Carpet beetles are responsible for much of the woolen damage we see in the Insect Diagnostic lab. They also destroy unprotected insect collections, wall hangings and taxidermy mounts.



Carpet beetle damage to feather and wool blanket

The damaging stage are small, light brown, bristly or hairy, slow moving, segmented worm-like larvae that are 1/5 inch or less in length. An average life cycle takes one year but can vary from 4-36 months. Larvae can grow backwards if deprived of food. This adaptation allows carpet beetles to live in hostile environments. Larvae are small enough to squeeze through small openings and infest items that are not well sealed. You can find the old cast skins from larvae in areas of past activity.

Adults feed on flower pollen and are do no damage. Females lay fragile eggs singly near food sources that hatch within 2-3 weeks. Adults are

more common in spring and can be found at windows trying to get outdoors. It is common to find adult carpet feeding on the pollen of *Spiraea* (Bridal wreath) bushes in May.

There are three main genera of Carpet beetles in Wisconsin.



Black carpet beetle adult

larvae

Black carpet beetle (*Attagenus*) Adults are a dull ,dark brown to black 3–5mm (1/4") and somewhat elongate– oval in shape . Larvae are golden brown, carrot shaped, up to 7–8mm with a number of distinct long hairs at the end of the body. This species often feeds on woolens, felts, furs and dried carrion and processed foods. It is a general feeder and can even be found feeding on dead insects in light fixtures. Larvae can be found a good distance away from the food source at times.



Anthrenus larvae and adult.

The genus **Anthrenus** has 18 species in the US and includes the varied carpet beetle *A. verbasci* and furniture carpet *A. flavipes*. Adults are 2–5 mm (1/8") oval with a spotted or banded color pattern of yellow, white, brown and black scales. Larvae are about 5mm long, chestnut brown worms covered with small hairs and have a rounded posterior.

Anthrenus feeds on dead insects, museum specimens(plant and animal) , hair, spices, seeds, and wool fabrics.



Trogoderma adults and larvae

The genus **Trogoderma** has a number of species and include the larger cabinet beetle, *T. inclusum* and the warehouse beetle *T. variable.* Adults are 2–6 mm (3/16 ") long oblong ,black or brown with reddish or white markings and hairs on the dorsal surface . Larvae are up to 8mm, stout , creamy yellow with tufts of darker hairs. Species can be found in wasp and bird nests, spices, protein powders, chocolates, nuts and other dry goods.

CONTROL-

Finding an occasional adult carpet beetle should not be of great concern If large numbers are seen, search for a hot spot as the source. Infested wallhangings, pet food, wool yarn stored under bed frames, furs, or accumulations of dead insects such as Asian Lady beetles or boxelder bugs could be the cause. Other sources include old furniture with horse hair padding, and homes built during the 1920 and 30's that used animal hair mixed with plaster. Look for infested bags of old pet food, bird seed, mouse bait, or other grain based food sources. Basements and attics often contain items that are undisturbed for long periods of time that allow breeding.Disposing of infested items should go a long way in solving the problem.

Prevention is easy when storing articles in tight fitting garment bags or plastic storage containers. All garments should be cleaned before storage. Consider using plastic or zip lock bags to store wool clothing. Storage cartons can be sealed with good quality tape, All seams and joints should seal tightly or be taped over. Vacuum closet floors, shelves and dresser drawers before putting clothing away for the summer. Furs can be professionally cleaned and place in cold storage for protection. Good housekeeping will remove, lint, dust, or hair. Be sure to move and vacuum under furniture if you have wool rugs, and the 1/2 inch space along baseboards which can be missed by many vacuums. Areas that are frequently vacuumed see far less damaged.

Cedar oil, cedar chips and cedar closets have generally been overrated as a control of wool pests. Very young larvae of clothes moths that are exposed to high concentrations of cedar oil vapor are killed, but older larvae, adults and most carpet beetles are not affected by the oil. Cedar wood in closets or chests will lose oils over time and become useless in killing any fabric pest. The advantage of tight fitting, well constructed cedar chest is because it excludes the insects.

If you have found a problem, vacuum or brush the insects off the article. Washing or dry cleaning will kill all life stages. Freezing is an option if the article has been kept at room temperature before the treatment. Place articles in freeze or in plastic bags, (with air removed and loosely packed,) expose to temperatures below zero for 72 hrs. Clothes moths and carpet beetles can survive in unheated attics, bird nests, wall voids and other sites if they have a chance to acclimate to slowly falling temperatures. The shock of going from 70 degrees to near 0 F⁰ is what kills the insects. Heating articles above 130° F for 1 hrs will also kill all life stages.

Direct spaying of fabric with insecticides or moth proofing agents is always a risk because of staining, discoloration, damage, and other reactions caused by water, solvents or the chemical themselves. These chemicals are also difficult to find. Make sure the product is labeled for use on fabric or rugs. There are clothing sprays that contain pyrethrum, permethrin, allethrin or resmethrin. A wider selection of insecticides are registered for carpet treatment but the same care is needed. Spraying baseboards and wall voids with a residual insecticide will reduce carpet beetle numbers but if the food source is not removed the problem will likely re- occur.

Moth balls (naphthalene) and PDB (paradiclorobenzene) change into gases and work as fumigants, but are ineffective as repellents. To be effective, they must be confined in a closed system with little air movement such as a sealed plastic box. Hanging these products in a closet will usually not build up to toxic levels, or if they do there is concern if people are breathing that much vapors.

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